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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

In cooperation with State, Federal and other Agencies
(Third Cotton Insect Survey Report for 1947)

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Boll weevils are now abundant in the cotton fields of North Carolina, South Carolina, Georgia, Alabama, Mississippi, and Louisiana. Serious losses may be expected on thousands of farms in those states if the weevils are not checked by hot, dry weather, or by the proper use of insecticides. The cotton fleahopper is now sufficiently abundant in a number of counties in the coastal region of Texas, so that the farmers are finding it necessary to use insecticides for their control.

The cotton leafworm has not yet been reported.

The grasshopper situation is serious in some parts of Texas. The bollworm, aphids, and thrips have been reported from cotton fields in most areas.

Supplies of calcium arsenate are reported limited in some areas, but no actual shortages have occurred.

BOLL WEEVIL

NORTH CAROLINA: The first survey records for 1947 indicate that boll weevils have survived the winter in large numbers. Weevils were found in 15 of the 16 fields examined in Hoke, Robeson, and Scotland Counties, with an average of 780 weevils per acre. In the first examinations made last year in these 3 counties, weevils were found in only 9 of the 21 fields examined with an average of only 179 weevils per acre. The heaviest infestations are reported from Scotland County where there was an average of 1483 weevils per acre in the 5 fields examined.

SOUTH CAROLINA: The boll weevil situation continues serious. The news release issued by the Extension Service of Clemson College on June 16, under the heading "Boll Weevil Infestation Increases in State" was as follows: "That boll weevil infestation is increasing in South Carolina is indicated by the second weekly weevil infestation report released today by Cedric R. Jordan, extension boll weevil specialist. The report shows an average of 679 weevils per acre and 14.1 percent punctured squares. This compares with 634 weevils per acre shown in last week's report. This week's report is an average of reports from county agents who examined 167 fields in 35 counties. Of the fields examined 143 were infested, ranging from 150 to 3000 weevils per acre and up to as high as 72 percent of punctured squares. Entomologists at the Pee Dee Experiment Station at Florence report more weevils active at the present time than has been the case in

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many years. Mr. Jordan urges farmers to act promptly to save their cotton crop. He points out that where cotton is squaring, mopping is ineffective, and advises the use of dust as soon as 10 to 25 percent of squares are punctured."

Entomologists found boll weevils in 110 of the 115 fields examined in 16 counties, largely in the southern half of the state, with an average of 578 weevils per acre as compared to an average of 250 weevils per acre during the same week in 1946, when 168 farms were examined in 24 counties. All of the fields examined in Aiken, Clarendon, Dorchester, Lexington, and Richland Counties were infested, with an average of more than 1,000 weevils per acre in each county. All of the fields examined in Williamsburg, Berkeley, Orangeburg, Bamberg, and Allandale Counties had boll weevils, with the county average ranging between 800 and 950 per acre. There was one field in each of 5 counties - Colleton, Calhoun, Hampton, Sumter, and Lee - in which no weevils were found, but the average number of weevils per acre in these counties ranged from 650 to 800. All of the 25 fields examined in Florence County had boll weevils, but the average number of weevils per acre was only 134.

At the Pee Dee Experiment Station, where thousands of weevils were placed in hibernation cages last fall, 2.94 percent of the weevils have emerged as compared to 1.63 percent last year on this date, which, in turn, was higher than in any year since 1942.

From the 1/5-acre trap plot of cotton near Florence, where all boll weevils are collected early in the season each year, more weevils have been collected this spring than during any spring since the trap plot was started 8 years ago. During the week 234 weevils were collected, making a total of 875 thus far this spring. The records of weevils collected from the trap plot to approximately the middle of June by years are as follows:

1947 - 875 through June 14
1946 - 172 " " 14
1945 - 476 " " 16
1944 - 126 " " 17

1943 - 429 through June 19
1942 - 510 " " 20
1941 - 625 " " 14
1940 - 34 " " 14

GEORGIA: The boll weevil situation is serious. In the examination of 63 fields in 28 counties all were found to be infested with weevils, except 3 fields in Atkinson, Bacon, and Tift Counties in the southern part of the state. Although weevils are less abundant in the Coastal Plain area of southern Georgia, most of the fields are infested, and infestations ranging from 11 to 30% punctured squares were found in Crisp, Dougherty, Sumter, and Terrell Counties, as well as in Burke,Jefferson, and Richmond Counties in the East-Central section of the State. Lighter infestations were recorded in Bacon, Berrien, Calhoun, Clay, Coffee, Dooley, Macon, Randolph, Tift, and Ware Counties in the Coastal Plains area. In Richmond County, 1 of the 2 fields examined had 41% punctured squares.

In the Piedmont region of northern Georgia cotton had not begun to square, but heavy infestations and much damage to young cotton buds were reported in all of the 20 fields examined in Clarke, Columbia, Elbert, Franklin, Hart, Lincoln, Madison, McDuffie, Oglethorpe, and Wilkes Counties in the northeastern section of the State. Farmers in Elbert and Hart Counties reported as many as 5 weevils on some small plants. Boll weevils are generally distributed over the fields. Serious losses may be expected unless the weevils are checked by hot, dry weather, or the proper use of insecticides.

ALABAMA: W. A. Ruffin, Extension Entomologist, Auburn, wrote on June 14: "This week I have been in contact with all county agents in District 4. This area covers 17 counties across the state just north of Auburn. All of the agents from this area reported more adult weevils on cotton at the present time than they have observed for a number of years."

"In Monroe County, which is in the southwestern part of the state, 500 weevils were collected from one acre of cotton.....In Autauga County, one of the Experiment Station workers reported 300 weevils per acre. From the Headland Substation in Henry County, we had a report which stated: 'Heavy infestation of weevils in squares.' I believe that a true picture of the situation in Alabama is that at the present time more adult weevils are in cotton fields than at any time in the past five years." (during the first half of June).

MISSISSIPPI: On June 16, Dr. Clay Lyle, Entomologist, of the Experiment Station and State Plant Board, issued a release containing the following information: "Boll weevils are more than twice as numerous on Mississippi farms as on this date last year. Examinations on 274 farms in 47 counties revealed weevils present on 127 with an average infestation of 376 per acre on the infested farms as compared to 185 per acre on this date last year. The average on all farms was 168 per acre as compared to 71 per acre last year. Rather high infestations are present in nearly all parts of the state except some Delta counties, and a small area along the Tennessee line. As far north as Panola County, 5 out of 5 farms examined had weevils, ranging as high as 850 per acre."

The boll weevil situation in Mississippi is serious. Weevils were found in all of the fields examined in 29 counties. The reports show heavy weevil populations in nearly 40 counties, including Attala, Choctaw, Greene, Grenada, Jones, Lamar, Montgomery, Oktibbeha, Panola, Warren, Webster, Winston, Yalobusha and Yazoo Counties. In only six counties, Coahoma, Leflore, Marshall, Prentiss, Quitman and Tate, were all the fields examined found to be free of weevils. These counties are in the northern half of the State.

LOUISIANA: Weather conditions were favorable for cotton and unfavorable for weevil development throughout the week. Temperatures were sufficiently high in most all cotton areas to kill weevils in squares on the ground. However, field examinations in Madison Parish in the northeastern section of the State showed an average of 267 weevils per acre as compared to 210 the previous week. In eight other parishes in central Louisiana weevils were found at an average rate of 282 per acre. These figures indicate that serious losses will occur if weather conditions are favorable for weevil development unless insecticides are properly applied.

ARKANSAS: Cotton fields were examined in 6 counties in the southeastern section of the State and boll weevils were found at an average rate of 54 per acre.

TEXAS: Dry weather prevailed in most sections of the State and cotton continued to fruit and make satisfactory growth.

Reports show extremely low boll weevil populations in the Lower Rio Grande Valley, and relatively low infestations in other areas of southern Texas, with the exception of some fields in Victoria, Jackson, and Wharton Counties.

The average weevil infestation in 432 fields in 18 counties of southern Texas was 3.1%. In 236 fields no boll weevils were found; in 174 fields less than 10% of the squares were punctured; in 11 fields the range was from 10 to 25%; in 7 fields it was from 25 to 50%; and in only 4 fields, 3 of them in Wharton County, were more than 50% of the squares punctured.

COTTON FLEAHOPPER

TEXAS: Cotton fleahoppers increased in most areas inspected in central and southern counties, with high infestations in many fields in the coastal territory. Dusting with 5% DDT-sulfur is general in this area, and excellent control is reported in the Port Lavaca-Victoria area. Growers should keep a close watch for hopper damage in the larger cotton, especially in the southern half of the State and apply control measures where needed.

ALABAMA: F. S. Chamberlin, Entomologist, of this bureau, reported June 13: "County agents at Fort Payne and Scottsboro, Alabama, reported numerous complaints of the cotton fleahopper on cotton in that section of the State."

MISCELLANEOUS INSECTS

TEXAS: Grasshoppers are reported in large numbers in many counties in the central portion of the State, especially in the Brazos, Colorado, and Trinity River bottoms. Much poisoning is being done to protect pastures and hay crops and to prevent damage to cotton.

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

CALIFORNIA: Gordon L. Smith, Assistant Entomologist of the Agricultural Experiment Station, Berkeley, wrote on June 7 concerning the cotton insect situation in the San Joaquin Valley as follows: "The usual pests of young cotton were present. Thrips, mostly onion thrips, Thrips tabaci, but some western flower thrips, Frankliniella occidentalis, were the most common pests of young cotton. The sugar beet armyworm, Laphygma exigua, was present but of very little importance. The red spider mite, Tetranychus atlanticus McG., is present in most cotton fields on young cotton. Aphids, mostly Aphis medicaginis, spotted light to heavy infestations, mostly in Kern County. There are a few outbreaks of migratory insects, including the yellow-striped armyworm, Prodenia praefica, large darkling ground beetles, Eleodes sps., grasshoppers, mostly Melanoplus differentialis, and the false chinch bug, Nysius minutus.

"Lygus hesperus Knight is more numerous on alfalfa, potatoes and other common host plants than it was in 1946. This insect does not occur or remain on cotton until about mid-June or early July. Pentatomids are scarce."

AIRZONA: Hemipterous insect populations principally Lygus, increased on cotton in the Salt River Valley. A few fields were dusted with DDT with ground machines for Lygus spp. control during the week.

TEXAS: Hemipterous insect populations on alfalfa in the El Paso Valley increased during the week. The populations before both the first and second mowings were higher this year than last year. Sweepings made on alfalfa showed 146 Lygus per 100 net strokes as compared to 63 the previous week.

June 18, 1947